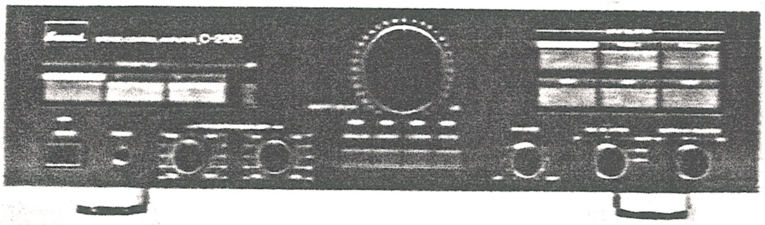
SERVICE MANUAL

STEREO CONTROL AMPLIFIER

SANSUI C-2102



CAUTION

1. Parts identified by the ⚠ symbol on the schematic diagram and the parts list are critical for safety. Use only replacement parts that have critical characteristics recommended by the manufacturer.
2. Make leakage-current or resistance measurements to determine that exposed parts are acceptably insulated from the supply circuit before returning the appliance to the customer.

Sansui

SANSUI ELECTRIC CO., LTD.

•SPECIFICATIONS

Input sensitivity and impedance (at 1 kHz)	
PHONO-1, 2 (MC)	250 μV/100 ohms
(Max. input capability: 30 mV at 1 kHz, less tha 0.01% total harmonic distortion)	
PHONO-1, 2 (HIGH MC)	2.5 mV/100 ohms
PHONO-1, 2 (MM)	2.5 mV/47 kohms
(Max. input capability; 300 mV at 1 kHz, less tha 0.01% total harmonic distortion)	
CD, TUNER, LINE-1, 2	150 mV/47 kohms
TAPE PLAY-1, 2, 3/DAT	150 mV/47 kohms
Output level (1,000 Hz)	
TAPE REC-1, 2, 3	150 mV
OUTPUT	1V
(Max. output level; 15V at 1 kHz, less than 0.01% to harmonic distortion)	
Total harmonic distortion (20 Hz to 20 kHz)	
PHONO-1, 2 (MC)	less than 0.01% (REC OUT)
PHONO-1, 2 (MM)	less than 0.005% (REC OUT)
CD, TUNER, LINE-1, 2	less than 0.003%
Frequency response (at 0.5V)	
PHONO-1, 2 (MM) (RIAA curve deviation)	20 Hz~20 kHz ±0.2 dB
CD, TUNER, LINE-1, 2	DC~300 kHz +0, −3 dB
TAPE PLAY-1, 2, 3	DC~300 kHz +0, −3 dB
Signal to noise ratio (short-circuit, A-network)	
PHONO-1, 2 (MC)	70 dB
PHONO-1, 2 (MM)	88 dB
CD, TUNER, LINE-1, 2	110 dB
TAPE PLAY-1, 2, 3	110 dB
Controls and Filter	
LOW	±12 dB (70 Hz~300 Hz)
HIGH	±12 dB (2 kHz~8 kHz)
SUBSONIC	−3 dB at 16 Hz (6 dB/oct)
MUTING	−20 dB
LOUDNESS	+8 dB at 50 Hz +6 dB at 10 kHz
(VOLUME: −30 dB	position)
Power requirements	
Power voltage	120/220/240V (50/60 Hz)
For U.S.A. & Canada	120V (60 Hz)
Power consumption	30 watts
Dimensions	430 mm (16-15/16″) W 119 mm (4-11/16″) H 326 mm (12-7/8″) D
Weight	5.5 kg (12.1 lbs) net 7.1 kg (15.7 lbs) packed

*** Design and specifications subject to changes without notice for im- provements.**

*** Due to local laws and regulations, this unit sold in some areas are no equipped with variable voltage selectors.**

CAUTION

1. The symbols, UL, CSA, SA, BS, UK, EU, AS, SEV and XX (EXPORT) on the parts list and the schematic diagram mean followings respectively.

   UL...................... Manufactured for U.S.A market.
   (Underwriters Laboratories approved model.)
   CSA.................... Manufactured for Canadian market.
   SA....................... Manufactured for South African market.
   BS, UK............... Manufactured for United Kingdom market.
   EU...................... Manufactured for European market.
   AS....................... Manufactured for Australian market.
   SEV.................... Manufactured for Swiss market.
   XX (EXPORT)..... Standard Version.
   NON MARK........ Common Parts.

2. Some printed circuit boards are not supplied as the assembled. To separate these in this service manual, the stock No's are not indicated at the ends of the board names. However, the individual parts on the circuit boards are provided by orders.

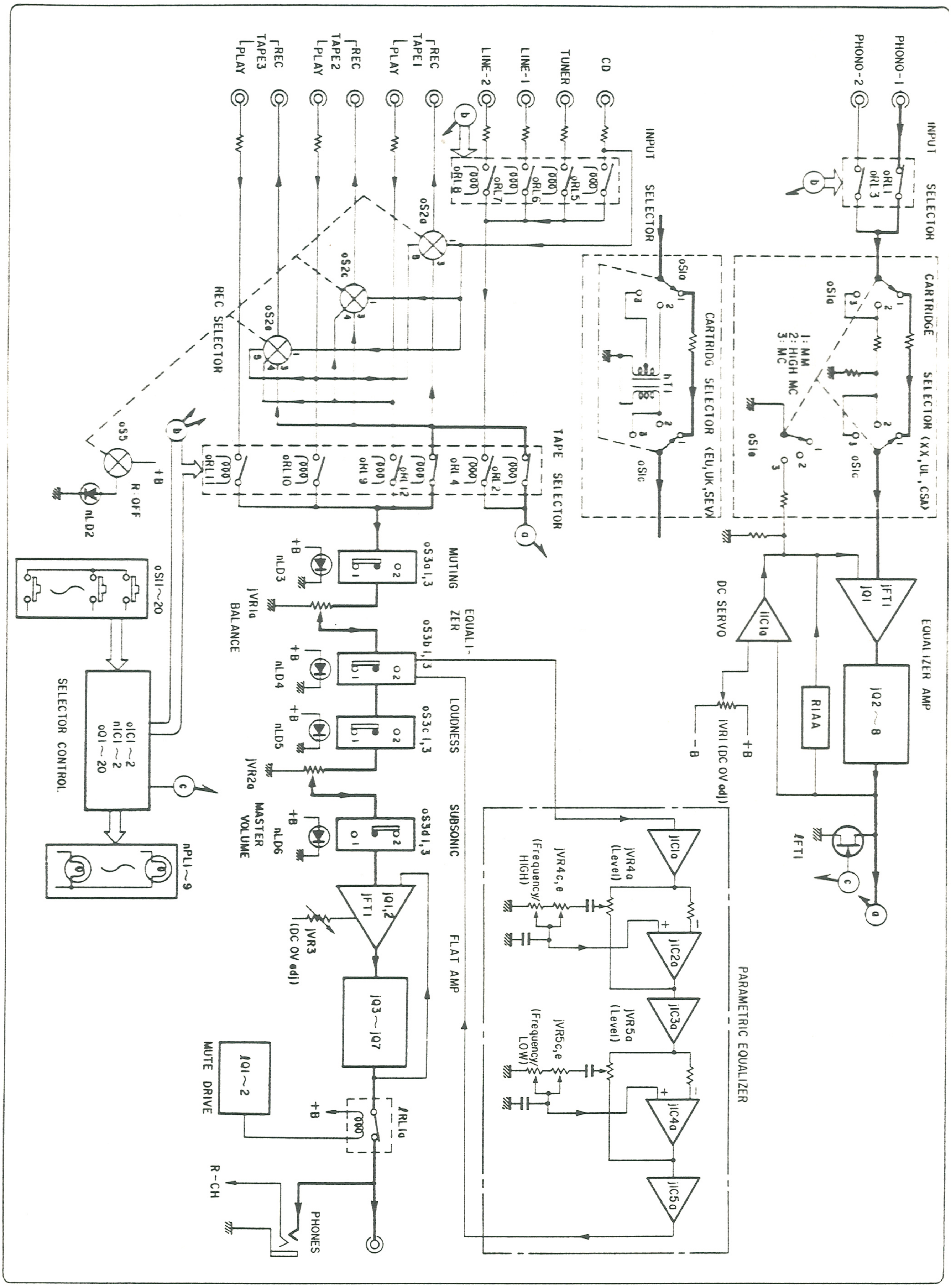
3. Since some of capacitors and resistors are omitted from parts lists in this service manual, refer to the Common Parts List for capacitors & resistors, which was issued on February 1983.

4. Abbreviations in this service manual are as follows.

•Abbreviations List

C.R. : Carbon Resistor
S.R. : Solid Resistor
Ce.R. : Cement Resistor
M.R. : Metal Film Resistor
F.R. : Fusing Resistor
N.I.R. : Non-Inflammable Resistor
A.R. : Array Resistor
C.C. : Ceramic Capacitor
C.T. : Ceramic Capacitor, Temperature Compensation
E.C. : Electrolytic Capacitor
E.L. : Low Leak Electrolytic Capacitor
E.B. : Bi-Polar Electrolytic Capacitor
E.B.L. : Low Leak Bi-Polar Electrolytic Capacitor
Ta.C. : Tantalum Capacitor
F.C. : Film Capacitor
M.P. : Metalized Paper Capacitor
P.C. : Polystyrene Capacitor
G.C. : Gimmic Capacitor
A.C. : Array Capacitor
V.R. : Variable Resistor
S.V.R. : Semi Variable Resistor
SW. : Switch
Chip R. : Chip Resistor
Chip C. : Chip Capacitor

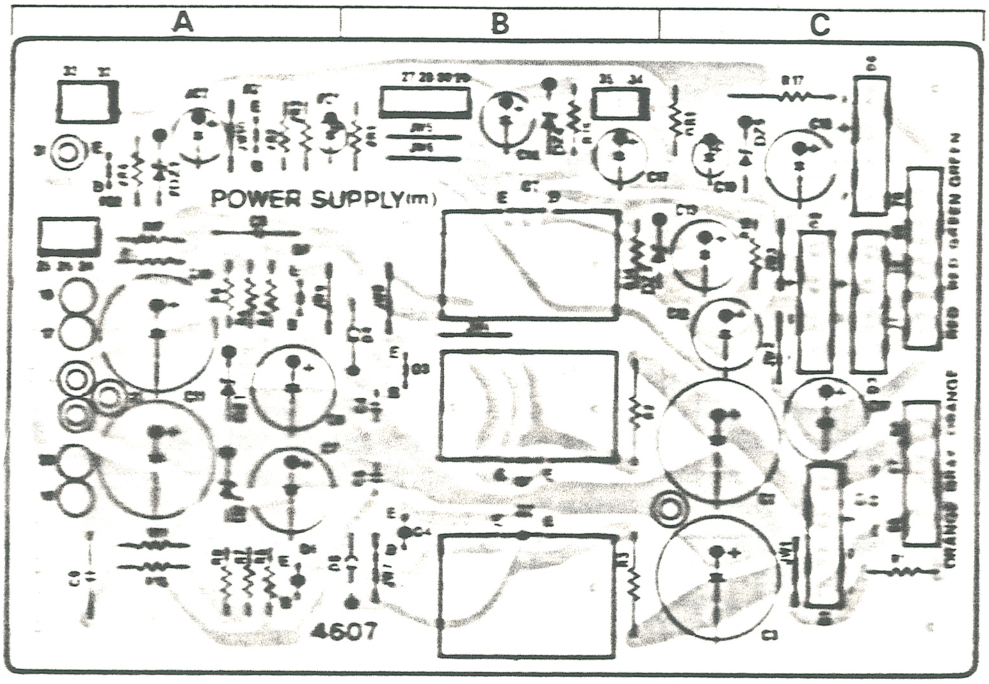
1. BLOCK DIAGRAM


INPUT SELECTOR
PHONO-1
PHONO-2
oRL1
oRL3
CARTRIDGE SELECTOR (XX, UL, CSA)
oS1a
oS1b
oS1c
1: MM
2: HIGH MC
3: MC
EQUALIZER AMP
jFT1
jQ1
jQ2~8
RIAA
DC SERVO
jIC1a
jVR1 (DC OV adj)
+B
-B
ℓFT1
CD
TUNER
LINE-1
LINE-2
REC TAPE1 PLAY
REC TAPE2 PLAY
REC TAPE3 PLAY
INPUT SELECTOR
oRL5
oRL6
oRL7
oRL8
CARTRIDG SELECTOR (EU, UK, SEV)
hT1
oS2a
oS2c
oS2e
REC SELECTOR
TAPE SELECTOR
oRL2
oRL4
oRL12
oRL9
oRL10
oRL11
oS5
R.OFF
nLD2
MUTING
oS3a1,3
nLD3
jVR1a BALANCE
EQUALIZER
oS3b1,3
nLD4
LOUDNESS
oS3c1,3
nLD5
jVR2a MASTER VOLUME
SUBSONIC
oS3d1,3
nLD6
FLAT AMP
jQ1,2
jFT1
jVR3 (DC OV adj)
jQ3~jQ7
ℓRL1a
MUTE DRIVE
ℓQ1~2
R-CH
PHONES
PARAMETRIC EQUALIZER
jIC1a
jVR4a (Level)
jVR4c,e (Frequency HIGH)
jIC2a
jIC3a
jVR5a (Level)
jVR5c,e (Frequency LOW)
jIC4a
jIC5a
oS11~20
SELECTOR CONTROL
oIC1~2
nIC1~2
oQ1~20
nPL1~9
a
b
c

2. PARTS LOCATION & PARTS LIST

2-1. F-4607 Power Supply Board (Stock No. 00984401)

Component Side

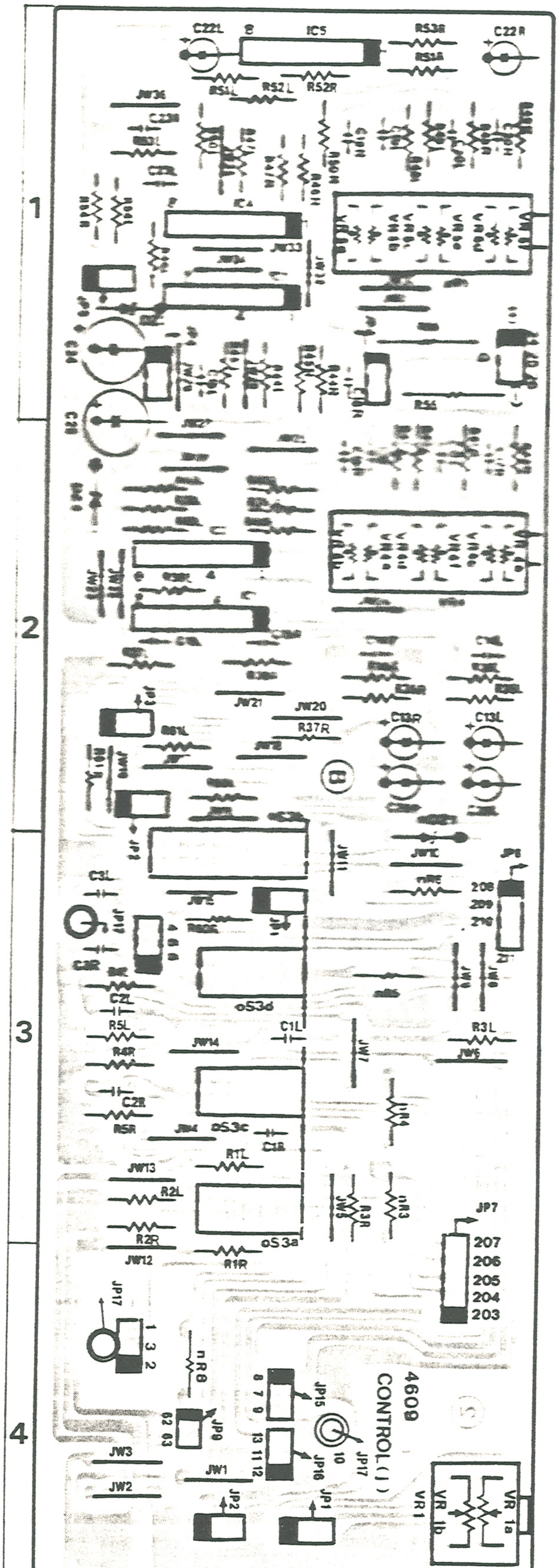


Parts List

Parts No.	Stock No.	Description
•Transistor		
IQ1	46581701	2SC1845
IQ2	46581701	2SC1845
•Zener Diode		
IDZ1	46111800	05Z6.2-Y
•Transistor		
⚠mQ1	46728901	2SC3298
⚠	or 48158701	2SC2591
⚠mQ2	46728801	2SA1306
⚠	or 48158601	2SA1111
mQ3	46581701	2SC1845
mQ4	46581601	2SA992
mQ5	46581701	2SC1845
mQ6	46581601	2SA992
⚠mQ7	03086101	2SD357
•Diode		
⚠mD1	07193300	UB-152LFF
⚠mD2	03117000	RB152-LFF
⚠mD3	03117000	RB152-LFF
mD4	46445500	10YD4.5
	or 46445600	10YD4.5
mD5	46445500	10YD4.5
	or 46445600	10YD4.5
⚠mD6	03117000	RB152-LFF
•Zener Diode		
mDZ1	46114200	05Z13-Y
mDZ2	46114200	05Z13-Y
mDZ3	46116000	05Z24-Y
mDZ4	46114200	05Z13-Y
mDZ5	46116000	05Z24-Y
⚠mR1	46227800	10Ω 1/2W N.I.R.
⚠mR2	46227400	4.7Ω 1/2W N.I.R.
⚠mR3	46227400	4.7Ω 1/2W N.I.R.
⚠mR15	46230000	680Ω 1/2W N.I.R
⚠mR16	46227400	4.7Ω 1/2W N.I.R.
⚠mR17	46229700	390Ω 1/2W N.I.R.
⚠mC1	48527800	0.01μF 630V F.C.
mC2	48198200	1000μF 50V E.C.
mC3	48198200	1000μF 50V E.C.
mC4	46654800	470pF 100V F.C.
mC5	46654800	470pF 100V F.C.
mC8	07255800	0.22μF 200V F.C.
mC9	07255800	0.22μF 200V F.C.
mC10	46628500	470μF 50V E.C.
mC11	46628500	470μF 50V E.C.
⚠nR1	46230600	2.2kΩ 1/2W N.I.R.

2-2. F-4609 PARAMETRIC EQUALIZER Board (Stock No. 00984701)

Component Side

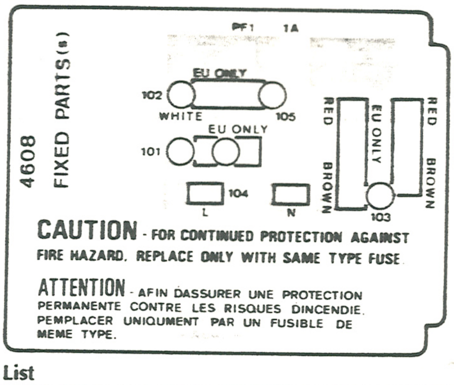

1
2
3
4
C22L
IC5
RS3R
RS1R
C22R
RS1L
RS2L
RS2R
JW36
JW33
JW27
R56
R37R
JW21
JW20
C13R
C13L
JW14
C3L
C3R
C2L
R5L
R4R
C2R
R5R
C1L
R3L
JW5
JW7
oS3d
oS3c
oS3a
C1R
R1L
R2L
R2R
R1R
JW13
JW12
nR8
nR5
nR4
nR3
R3R
JP7
207
206
205
204
203
208
209
210
JP17
JP15
JP16
JP9
JP2
JP1
JP3
JP8
JW3
JW2
JW1
JW37
4609
CONTROL(J)
VR1
VR 1a
VR 1b

Parts List

Parts No.	Stock No.	Description
•IC		
IC1	46288800	M5220L
IC2	46288800	M5220L
IC3	46288800	M5220L
IC4	46288800	M5220L
IC5	46288800	M5220L
•Zener Diode		
DZ2	46115700	05Z[illegible]-Y
DZ3	46115700	05Z[illegible]-Y
⚠R55	46909600	330Ω 3W N.F.
⚠R56	46909600	330Ω 3W N.F.
C1	46655000	560pF 100V F.C.
C2	46283900	0.068µF 50V F.C.
C3	46886600	0.043µF 100V F.C.
C11	46654600	390pF 100V F.C.
C19	46696100	0.024µF 50V F.C.
C20	46283100	0.015µF 50V F.C.
C22	46291800	1000pF 50V F.C.
VR1	48112410	250kΩ V.R., BALANCE
VR4	48111000	100kΩ-10kΩ V.R., PARAMETRIC EQUALIZER
VR5	48111000	100kΩ-10kΩ V.R., PARAMETRIC EQUALIZER
•Zener Diode		
nDZ1	46109100 or 46109200	05Z2.7-Y 05Z2.7-Z
⚠nR8	46230500	1.8kΩ 1/2W N.F.R.
oS3	48113100	Push SW., EQUALIZER-SUBSONIC•LOUDNESS•MUTING

2-3. F-4608 Fuse Board

Component Side

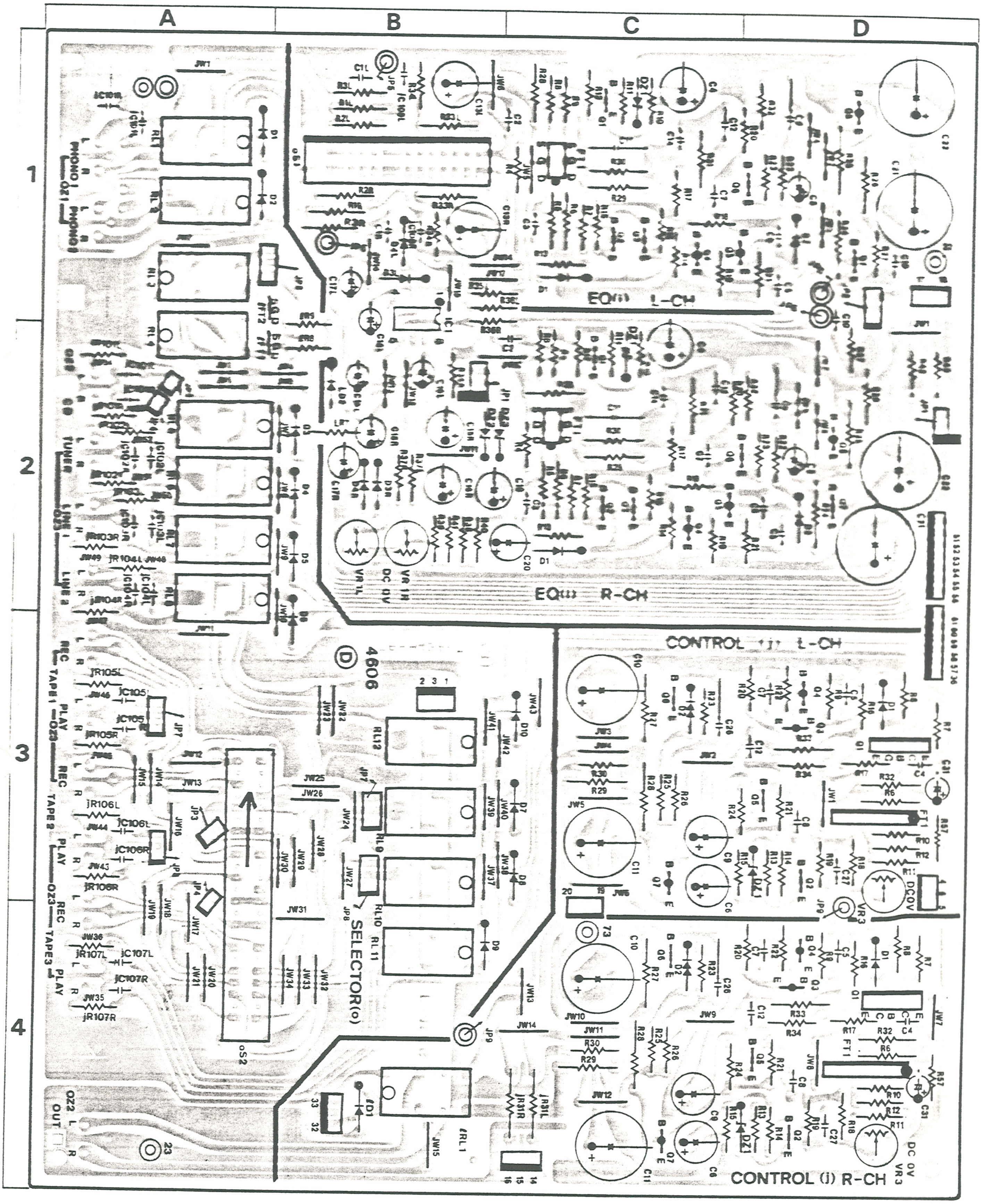

PF1 1A
EU ONLY
102
WHITE
105
EU ONLY
101
104
L
N
103
RED
BROWN
EU ONLY
RED
BROWN
4608
FIXED PARTS(s)
CAUTION - FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE FUSE.
ATTENTION - AFIN DASSURER UNE PROTECTION PERMANENTE CONTRE LES RISQUES DINCENDIE, PEMPLACER UNIQUMENT PAR UN FUSIBLE DE MEME TYPE.

Parts List

Parts No.	Stock No.	Description
⚠pF1	07188400	Fuse 1.0A 250V <XX, UL, CSA>
⚠	07184700	Fuse 1.0A 250V <EU, UK, SEV>

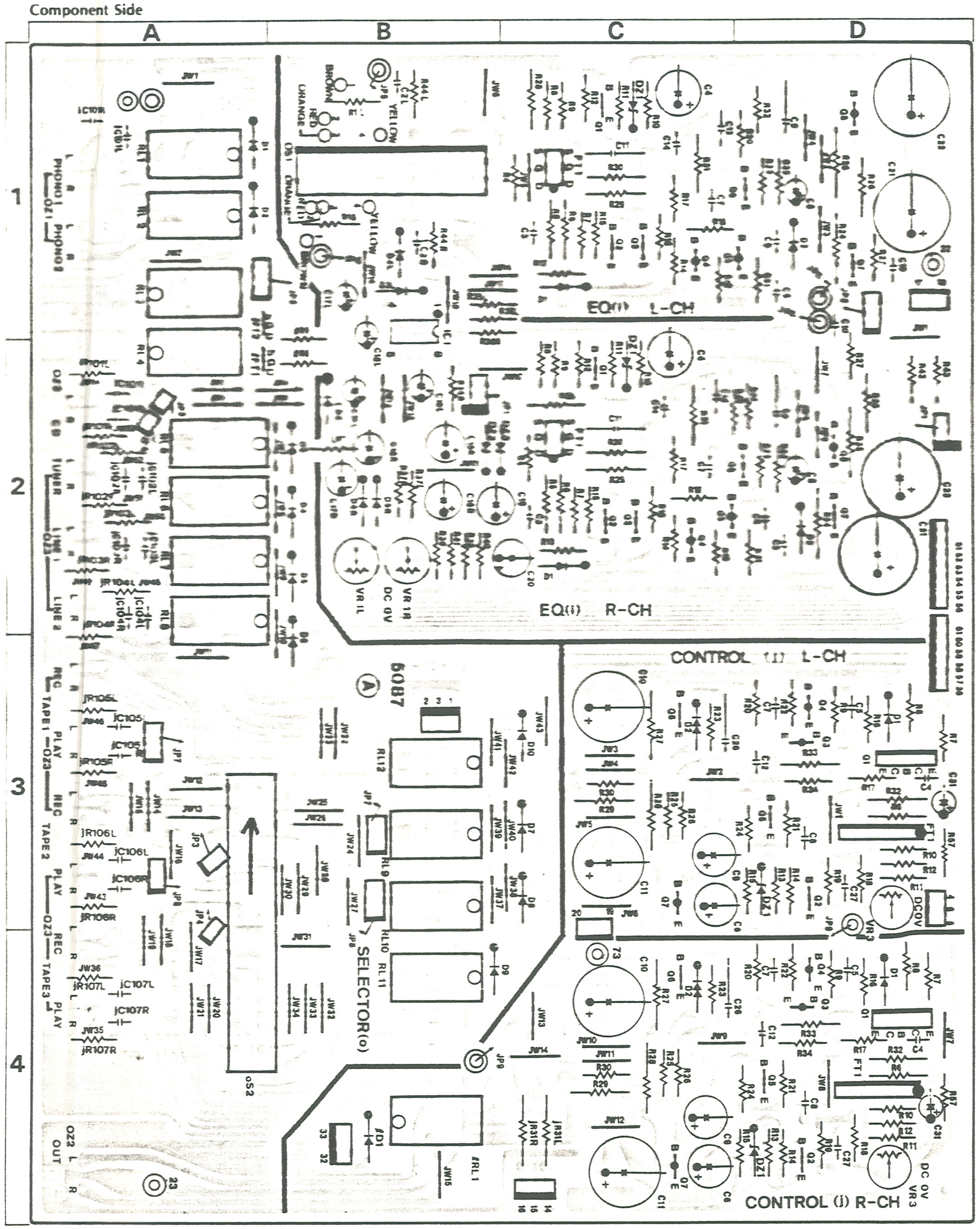
2-4. F-4606 EQUALIZER Amp. and FLAT Amp. Board <XX, UL, CSA> (Stock No. 00984201=XX,UL) (Stock No. 00984203=CSA)

Component Side


A
B
C
D
1
2
3
4
PHONO
OZ1
TUNER
LINE
REC
TAPE1
PLAY
OZ3
TAPE2
TAPE3
OZ2
OUT
EQ(i) L-CH
EQ(i) R-CH
CONTROL (i) L-CH
CONTROL (i) R-CH
SELECTOR(o)
4606
DC 0V
VR3
RL1
RL2
RL3
RL4
RL12
RL9
RL10
RL11
OS2
IC1
FT1

2-5. F-5087 EQUALIZER Amp. and FLAT Amp. Board <EU, UK, SEV> (Stock No. 01010605)

Component Side

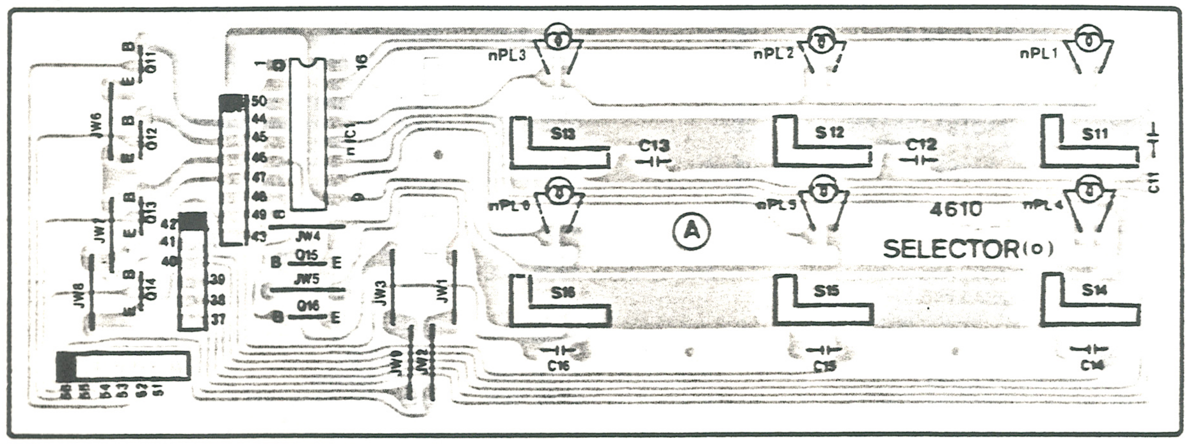


Parts List <F-4606 or F-5087>

Parts No.	Stock No.	Description
hT1	48562200	MC Head Transformer <EU,UK,SEV>
•Transistor		
iQ1	46581701	2SC1845
iQ2	46581701	2SC1845
iQ3	46581701	2SC1845
iQ4	46581601	2SA992
iQ5	46581601	2SA992
iQ6	46581701	2SC1845
iQ7	46728301	2SC2705
iQ8	46728201	2SA1145
•FET		
iFT1	03703500	2SK146
•IC		
iIC1	03607700	NJM4558D
•Diode		
iD1	03117600	1S2473T77
	or 46086000	1S1588TP-3
iD2	03117600	1S2473T77
	or 46086000	1S1588TP-3
iD3	03117600	1S2473T77
	or 46086000	1S1588TP-3
iD4	03117600	1S2473T77
	or 46086000	1S1588TP-3
•Zener Diode		
iDZ1	46114200	05Z13-Y
iDZ2	46114200	05Z13-Y
iDZ3	46114200	05Z13-Y
iR19	08907100	820Ω 1/4W C.R. (XX,UL,EU,UK,SEV)
⚠	46230100	820Ω 1/2W N.I.R. (CSA)
iR20	08907100	820Ω 1/4W C.R. (XX,UL,EU,UK,SEV)
⚠	46230100	820Ω 1/2W N.I.R. (CSA)
iR21	08905300	150Ω 1/4W C.R. (XX,UL, EU,UK,SEV)
⚠	46229200	150Ω 1/2W N.I.R. (CSA)
iR23	08905300	150Ω 1/4W C.R. (XX,UL,EU,UK,SEV)
⚠	46229200	150Ω 1/2W N.I.R. (CSA)
⚠iR24	08922500	47Ω 1/2W N.I.R.
⚠iR25	08922500	47Ω 1/2W N.I.R.
iR29	46009100	56kΩ 1/2W C.R.
iR30	46005300	1.5kΩ 1/2W C.R.
iR31	46006500	4.7kΩ 1/2W C.R.
⚠iR42	46230800	3.3 kΩ 1/2W N.I.R.
⚠iR43	46230800	3.3 kΩ 1/2W N.I.R.
iC1	46655600	1000pF 100V F.C.
iC2	46653200	100pF 100V F.C.
iC3	46654600	390pF 100V F.C.
iC9	00411600	47000μF 400V F.C
iC10	46282500	3900pF 50V F.C.
iC11	00414500	0.056μF 100V P.C.
iC12	00413200	0.016μF 100V P.C.
iC14	46655000	560pF 100V F.C.
iVR1	10342500	4.7kΩ (B) S.V.R., DC 0V adj. (EQ. AMP)
•Transistor		
jQ1	03068801	2SC2291
jQ2	46581701	2SC1845
jQ3	46581601	2SA992
jQ4	46581601	2SA992
jQ5	46581701	2SC1845
jQ6	46728301	2SC2705
jQ7	46728201	2SA1145
•FET		
jFT1	48583300	μPA68HA-L
•Diode		
jD1	03117600	1S2473T77
	or 46086000	1S1588TP-3
jD2	03401500	Varistor MV12
•Zener Diode		
jDZ1	46111800	05Z6.2-Y
⚠jR27	08922300	33Ω 1/2W N.I.R.
⚠jR28	08922300	33Ω 1/2W N.I.R.
⚠jR31	00182600	39Ω 1W N.I.R.
jC4	46653800	180pF 100V F.C.
jC6	46655600	1000pF 100V F.C.
jC26	00411600	47000μF 400V F.C.
jC27	46655600	1000pF 100V F.C.
jVR3	10341500	100Ω (B) S.V.R., DC 0V adj. (Flat AMP)
•FET		
jFT1	46643500	2SK163-K1
	or 46643501	2SK163-K2
	or 46643600	2SK117-C
	or 46643601	2SK117-Y
jFT2	46643500	2SK163-K1
	or 46643501	2SK163-K2
	or 46643600	2SK117-C
	or 46643601	2SK117-Y
•Diode		
lD1	48123600	11E2
lD2	03117600	1S2473T77
	or 46086000	1S1588TP-3
lRL1	48004500	Relay
•Diode		
oD1	48123600	11E2
oD2	48123600	11E2
oD3	48123600	11E2
oD4	48123600	11E2
oD5	48123600	11E2
oD6	48123600	11E2
oD7	48123600	11E2
oD8	48123600	11E2
oD9	48123600	11E2
oD10	48123600	11E2
oS1	46731600	Slide SW., CARTRIDGE SELECTOR
oS2	48116200	Slide SW., REC SELECTOR
oRL1	48004500	Relay
oRL2	48004500	Relay
oRL3	48004500	Relay
oRL4	48004500	Relay
oRL5	48004500	Relay
oRL6	48004500	Relay
oRL7	48004500	Relay
oRL8	48004500	Relay
oRL9	48004500	Relay
oRL10	48004500	Relay
oRL11	48004500	Relay
oRL12	48004500	Relay
oZ1	46685100	4P Terminal, PHONO-1•PHONO-2
oZ2	48109900	2P Terminal, OUTPUT•CD
oZ3	46363900	6P Pin Terminal, TUNER•LINE-1•LINE-2•TAPE-1•TAPE-2

2-6. F-4610 INPUT SELECTOR Board (Stock No. 00984801)

Component Side


nPL3
nPL2
nPL1
S13
C13
S12
C12
S11
C11
nIC1
nPL6
nPL5
nPL4
4610
SELECTOR(o)
Ⓐ
S16
S15
S14
C16
C15
C14
Q11
Q12
Q13
Q14
Q15
Q16
JW1
JW3
JW4
JW5
JW6
JW8
JW9
JW12

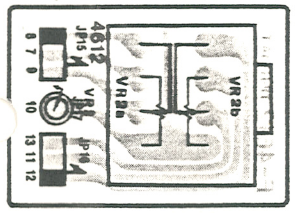
Parts List

Pr No.	Stock No.	Description
•IC		
nIC1	48109500	BA12003
nPL1	48049600	8V 0.1A Pilot Lamp, POHNO1
nPL2	48049600	8V 0.1A Pilot Lamp, PHONO2
nPL3	48049600	8V 0.1A Pilot Lamp, CD
nPL4	48049600	8V 0.1A Pilot Lamp, TUNER
nPL5	48049600	8V 0.1A Pilot Lamp, LINE1
nPL6	48049600	8V 0.1A Pilot Lamp, LINE2

Parts No.	Stock No.	Description
•Transistor		
oQ11	48109800	DTC143ES
oQ12	48109800	DTC143ES
oQ13	48109800	DTC143ES
oQ14	48109800	DTC143ES
oQ15	48109800	DTC143ES
oQ16	48109800	DTC143ES
oS11	46396700	Push SW., PHONO-1
oS12	46396700	Push SW., PHONO-2
oS13	46396700	Push SW., CD
oS14	46396700	Push SW., TUNER
oS15	46396700	Push SW., LINE-1
oS16	46396700	Push SW., LINE-2

2-7. F-4612 MASTER VOLUME Board

Component Side

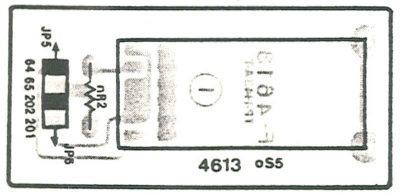

4612
JP15
JP16
VR2B
VR2D

Parts List

Parts No.	Stock No.	Description
jVR2	48110900	100kΩ V.R., MASTER VOLUME

2-8. F-4613 REC SELECTOR Board

Component Side

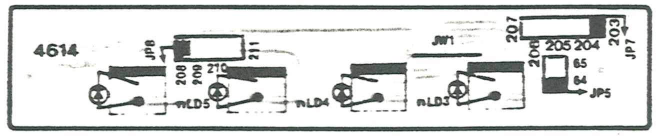

JP5
JP6
4613 oS5

Parts List

Parts No.	Stock No.	Description
oS5	48112310	Rotary SW., REC SELECTOR

2-9. F-4614 L.E.D Board

Component Side

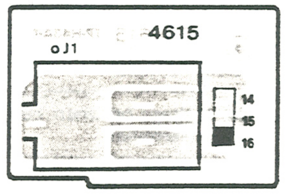

4614
nLD5
nLD4
nLD3
JW1
JP5
JP7

Parts List

Parts No.	Stock No.	Description
•LED		
nLD3	48668400	SEL1810A, MUTING
nLD4	48668400	SEL1810A, LOUDNESS
nLD5	48668400	SEL1810A, SUBSONIC
nLD6	48668400	SEL1810A, EQUALIZER

2-10. F-4615 PHONES Jack Board

Component Side

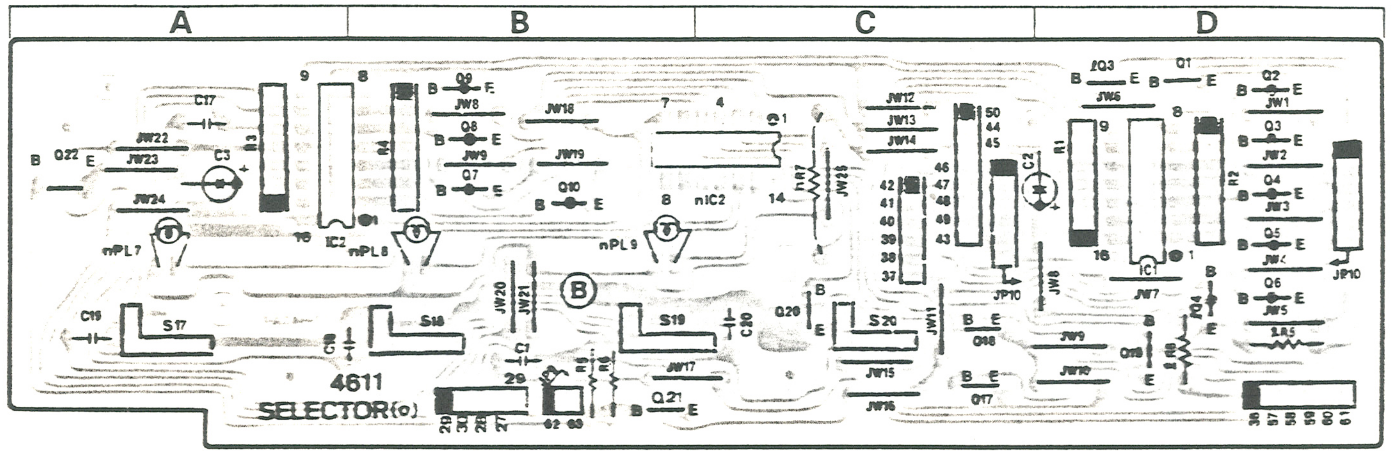

4615
oJ1
14
15
16

Parts List

Parts No.	Stock No.	Description
oJ1	46078100	Jack, PHONES

2-11. F-4611 SELECTOR Control Board (Stock No. 00984901)

Component Side


A
B
C
D
C17
Q22
JW22
JW23
JW24
C3
IC2
nPL7
nPL8
nPL9
Q7
Q8
Q9
Q10
JW18
JW19
nIC2
JW12
JW13
JW14
C2
IC1
Q1
Q2
Q3
Q4
Q5
Q6
JW1
JW2
JW3
JW5
JW6
JW7
JW8
JP10
S17
S18
S19
S20
Ⓑ
JW20
JW21
C1
Q21
Q20
JW15
JW16
JW17
Q17
Q18
JW9
JW10
4611
SELECTOR(o)

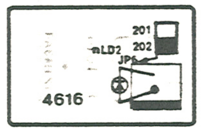
Parts List

Parts No.	Stock No.	Description
•Transistor		
lQ3	48109800	DTC143ES
lQ4	48109700	DTA143ES
•IC		
nIC2	46397500	BA612CA
⚠nR7	00192000	820Ω 2W N.I.R.
nPL7	48049600	8V 0.1A Pilot Lamp (W/CAP)
nPL8	48049600	8V 0.1A Pilot Lamp (W/CAP)
nPL9	48049600	8V 0.1A Pilot Lamp (W/CAP)
•Transistor		
oQ1	48109700	DTA143ES
oQ2	48109700	DTA143ES
oQ3	48109700	DTA143ES
oQ4	48109700	DTA143ES
oQ5	48109700	DTA143ES
oQ6	48109700	DTA143ES
oQ7	48109700	DTA143ES
oQ8	48109700	DTA143ES

Parts No.	Stock No.	Description
oQ9	48109700	DTA143ES
oQ10	48109700	DTA143ES
oQ17	48109800	DTC143ES
oQ18	48109800	DTC143ES
oQ19	48109800	DTC143ES
oQ20	48109800	DTC143ES
oQ21	46581701	2SC1845
oQ22	46581701	2SC1845
•IC		
oIC1	48109600	TC9135P
oIC2	48109600	TC9135P
oR1	46346800	100kΩX6 1/8W A.R.
oR2	46346800	100kΩX6 1/8W A.R.
oR3	46346800	100kΩX6 1/8W A.R.
oR4	46346800	100kΩX6 1/8W A.R.
oS17	46396700	Push SW., TAPE-1
oS18	46396700	Push SW., TAPE-2
oS19	46396700	Push SW., TAPE-3
oS20	46396700	Push SW., OFF

2-12. F-4616 REC SELECTOR Indicator Board

Component Side

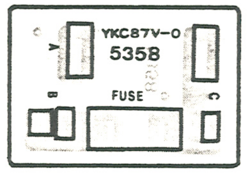

201
202
nLD2
4616

Parts List

Parts No.	Stock No.	Description
•LED		
nLD2	48668400	SEL1810A

2-13. F-5358 Fuse Board <SEV>

Component Side

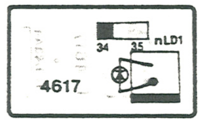

YKC87V-0
5358
FUSE

Parts List

Parts No.	Stock No.	Description
pF2	07185000	Fuse, 2.0A 250V

2-14. F-4617 Power Indicator Board

Component Side

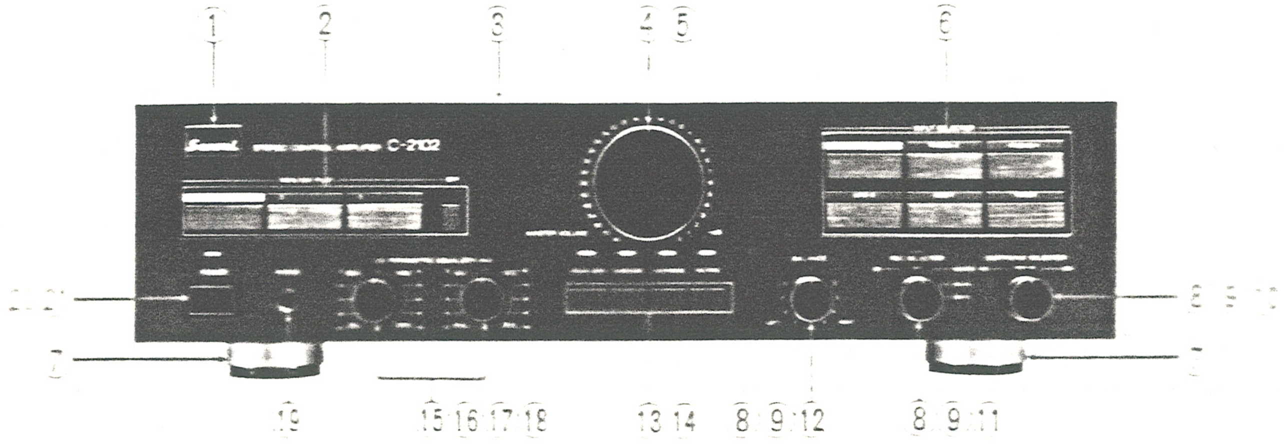

34
35
nLD1
4617

Parts List

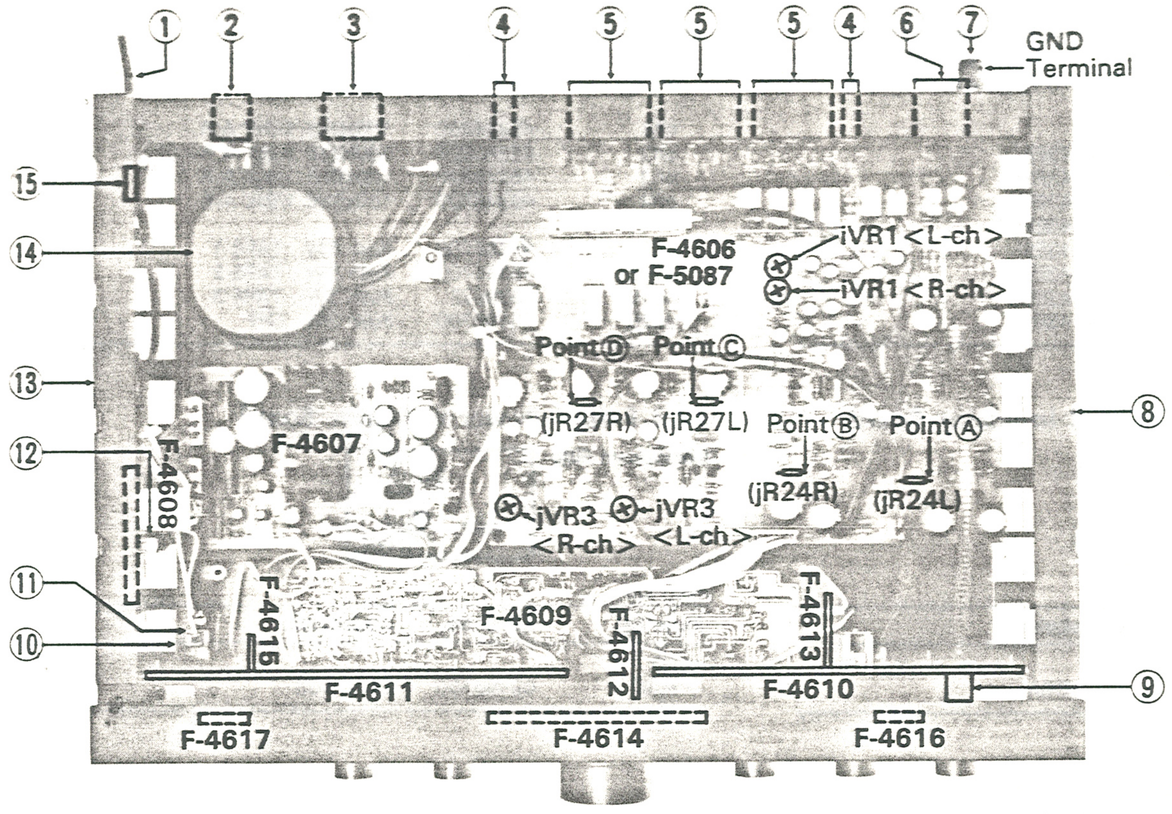
Parts No.	Stock No.	Description
•LED		
nLD1	03193700	SEL1110S

3. OTHER PARTS

3-1. Front View



3-2. Top View



Parts List <Front View>

Parts No.	Stock No.	Description
1	27210900	Front Panel Ass'y
2	46396700	Push SW., TAPE-1•TAPE-2•TAPE-3•OFF
3	27210800	Bonnet
4	27221400	Knob, MASTER VOLUME
5	48110900	100kΩ(A) V.R., MASTER VOLUME
6	46396700	Push SW., PHONO-1•PHONO-2•CD•TUNER•LINE-1•LINE-2
7	47716600	Leg Ass'y
8	27209600	Knob, BALANCE•REC SELECTOR•CARTRIDGE SELECTOR
9	50485400	Masking Sheet
10	48112210	Rotary SW. (with flexible wire) CARTRIDGE SELECTOR
11	48112300	Rotary SW. (with flexible wire) REC SELECTOR
12	48112400	250kΩ V.R., BALANCE
13	47625000	Push Knob, EQUALIZER•SUBSONIC•LOUDNESS•MUTING
14	48113100	Push SW., EQUALIZER•SUBSONIC•LOUDNESS•MUTING
15	27209800	Knob, PARAMETRIC EQUALIZER Level (Outside)
16	27209700	Knob, PARAMETRIC EQUALIZER Frequency (Inside)
17	47678900	Teflon Washer
18	48111000	100kΩ+10kΩ V.R., PARAMETRIC EQUALIZER
19	46078100	Jack, PHONES
20	47633700	Push Knob, POWER
⚠ 21	46612900	Push SW., POWER

Parts List <Top Viwe>

Parts No.	Stock No.	Description
⚠ 1	46407700	Power Supply Cord <XX>
⚠	46128900	Power Supply Cord <EU,UK>
⚠	48188000	Power Supply Cord (polarized) <UL,CSA>
⚠ 2	48069600	Voltage Selector Switch <XX>
⚠	07204700	Slide SW., Voltage Selector <EU,UK,SEV>
⚠ 3	46730400	AC Outlet <XX>
⚠	46161000	AC Outlet <EU,SEV>
⚠	48184700	AC Outlet (polarized) <UL,CSA>
⚠	46364800	AC Outlet <UK>
4	48109900	2P Terminal Board, OUTPUT•CD
5	46363900	6P Terminal Board, TUNER•LINE-1•LINE-2•TAPE-1•TAPE-2•TAPE-3
6	46685100	4P Terminal Board, PHONO-1•PHONO-2
7	22301900	GND Terminal
8	47661900	Right Side Panel Ass'y
9	48112210	Rotary SW., CARTRIDGE SELECTOR
⚠ 10	46425800	0.01μF 400V C.C.
⚠ 11	46612900	Push SW., POWER
⚠ 12	07188400	Fuse 1.0A 250V <XX,UL,CSA>
⚠	07184700	Fuse 1.0A 250V <EU,UK,SEV>
13	47661800	Left Side Panel Ass'y <XX,UL,CSA>
	47729900	Left Side Panel Ass'y <EU,UK,SEV>
⚠ 14	15018311	Power Transformer <XX>
⚠	15018312	Power Transformer <UL,CSA>
⚠	15018315	Power Transformer <EU,UK,SEV>
15	47157300	Powre Supply Cord Cover

4. ADJUSTMENT

Condition:
1. Master Volume .... Minimum
2. Room Temparature .... 18°C～28°C (65°F～83°F)
3. Test Equipment .... DC Volt Meter
4. For this adjustment, run the unit for more than 3 minutes after the power is switched ON.

4-1. F-4606 or F-5087 Equalizer Amp. Circuit Adjustment (Refer to Top View)

Condition:
1. Insert Short-Pin plag to the PHONO-2 terminal
2. Set INPUT SELECTOR switch to PHONO-2

STEP	SUBJECT	MESURE OUTPUT	ADJUST	ADJUST FOR
1	Center DC 0V Adj. <L-ch>	DC Voltage between Test Point Ⓐ (iR24L) and GND Terminal.	iVR1 <L-ch>	DC 0±5mV
2	Center DC 0V Adj. <R-ch>	DC Voltage between Test Point Ⓑ (iR24R) and GND Terminal.	iVR1 <R-ch>	DC 0±5mV

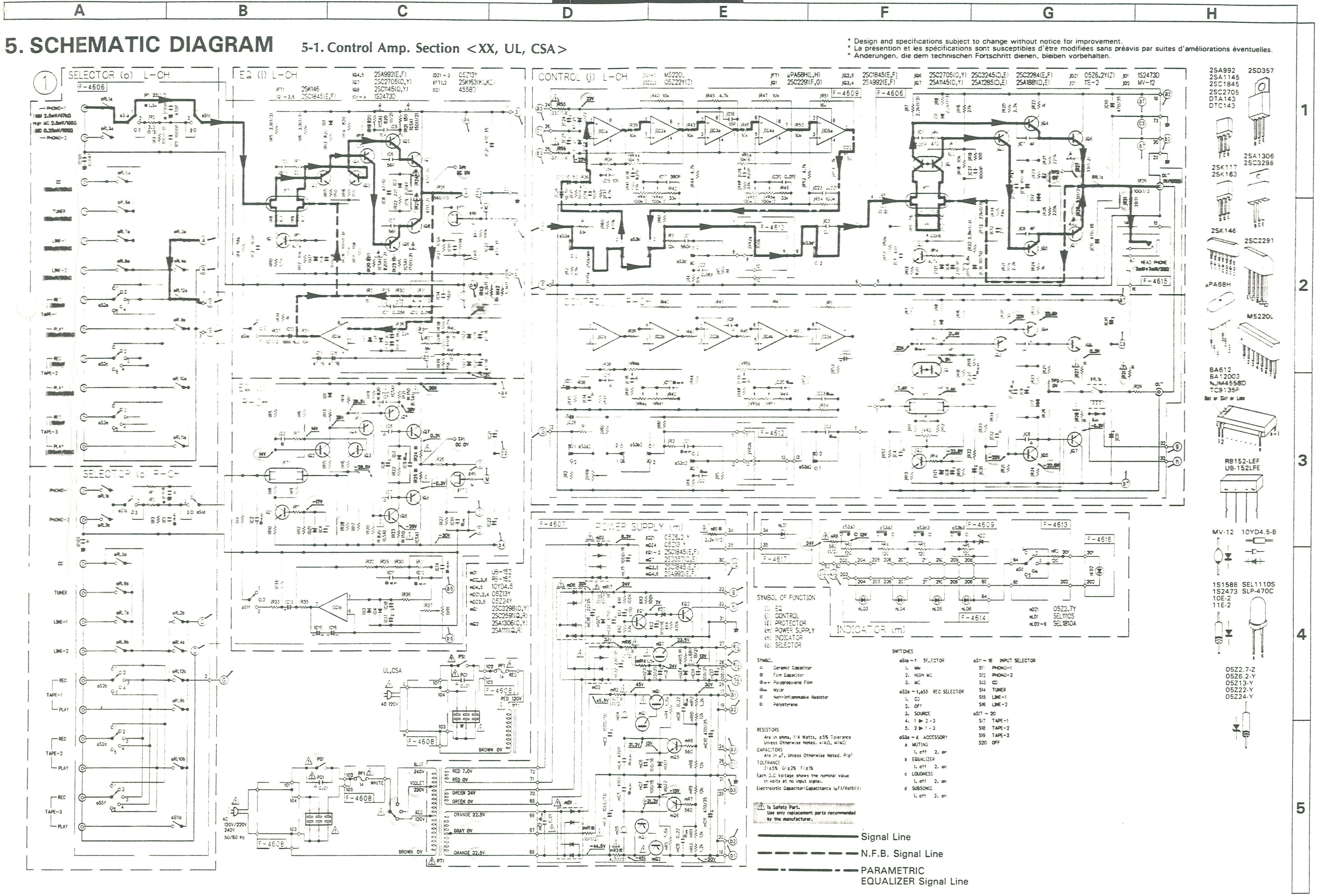
4-2. F-4606 or F-5087 Flat Amp. Circuit Adjustment (Refer to Top View)

STEP	SUBJECT	MESURE OUTPUT	ADJUST	ADJUST FOR
1	Center DC 0V Adj. <L-ch>	DC Voltage between Test Point Ⓒ (jR27L) and GND Terminal.	jVR3 <L-ch>	DC 0±5mV
2	Center DC 0V Adj. <R-ch>	DC Voltage between Test Point Ⓓ (jR27R) and GND Terminal.	jVR3 <R-ch>	DC 0±5mV

5. SCHEMATIC DIAGRAM

5-1. Control Amp. Section <XX, UL, CSA>

- * Design and specifications subject to change without notice for improvement.
- * La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
- * Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.


A
B
C
D
E
F
G
H
1
2
3
4
5
SELECTOR (o) L-CH
EQ (i) L-CH
CONTROL (j) L-CH
CONTROL (j) R-CH
EQ (i) R-CH
SELECTOR (o) R-CH
POWER SUPPLY (m)
INDICATOR (m)
F-4606
F-4607
F-4608
F-4609
F-4612
F-4613
F-4614
F-4615
F-4616
F-4617
PHONO-1
PHONO-2
CD
TUNER
LINE-1
LINE-2
TAPE-1
TAPE-2
TAPE-3
REC
PLAY
HEAD PHONE
UL,CSA
AC 120V
AC 120V/220V 240V 50/60 Hz
BLUE
VIOLET
WHITE
RED
BROWN
RED 7.0V
RED 0V
GREEN 24V
GREEN 0V
ORANGE 32.5V
GRAY 0V
ORANGE 32.5V
2SA992
2SA1145
2SC1845
2SC2705
DTA143
DTC143
2SD357
2SA1306
2SC3298
2SK117
2SK163
2SK146
2SC2291
μPA68H
M5220L
BA612
BA12003
NJM4558D
TC9135P
RB152-LEF
UB-152LFE
MV-12
10YD4.5-B
1S1588
1S2473
10E-2
11E-2
SEL1110S
SLP-470C
05Z2.7-Z
05Z6.2-Y
05Z13-Y
05Z22-Y
05Z24-Y

SYMBOL OF FUNCTION
(i) EQ
(j) CONTROL
(ℓ) PROTECTOR
(m) POWER SUPPLY
(n) INDICATOR
(o) SELECTOR

SYMBOL
- △ Ceramic Capacitor
- ⊚ Film Capacitor
- ⊚PP Polypropylene Film
- ⊚M Mylar
- ⊡ Non-Inflammable Resistor
- ⊗ Polystyrene

RESISTORS
Are in ohms, 1/4 Watts, ±5% Tolerance Unless Otherwise Noted. K:kΩ, M:MΩ
CAPACITORS
Are in μF, Unless Otherwise Noted. P:pF
TOLERANCE
J:±5% G:±2% F:±1%
Each D.C Voltage shows the nominal value in volts at no input signal.
Electrolytic Capacitor:Capacitance (μF)/Volt(V)

SWITCHES

oS1a ~ f SELECTOR
1. MM
2. HIGH MC
3. MC

oS2a ~ f, oS5 REC SELECTOR
1. CD
2. OFF
3. SOURCE
4. 1 ▶ 2・3
5. 2 ▶ 1・3

oS3a ~ d ACCESSORY
- a MUTING
  - 1. off 2. on
- b EQUALIZER
  - 1. off 2. on
- c LOUDNESS
  - 1. off 2. on
- d SUBSONIC
  - 1. off 2. on

oS11 ~ 16 INPUT SELECTOR
S11 PHONO-1
S12 PHONO-2
S13 CD
S14 TUNER
S15 LINE-1
S16 LINE-2

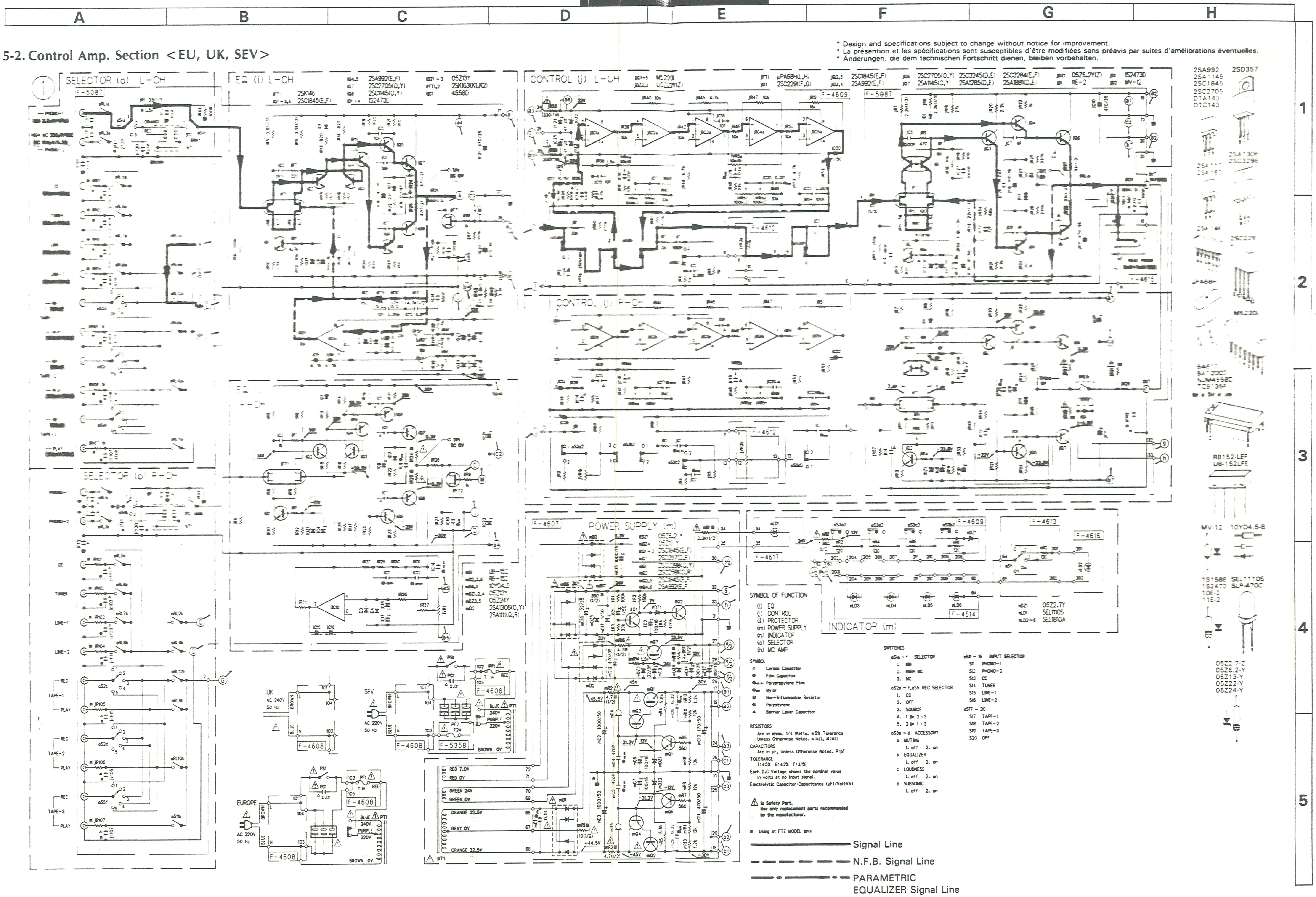
oS17 ~ 20
S17 TAPE-1
S18 TAPE-2
S19 TAPE-3
S20 OFF

⚠ Is Safety Part.
Use only replacement parts recommended by the manufacturer.

Signal Line
N.F.B. Signal Line
PARAMETRIC EQUALIZER Signal Line

5-2. Control Amp. Section <EU, UK, SEV>

- Design and specifications subject to change without notice for improvement.
- La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
- Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.


A
B
C
D
E
F
G
H
1
2
3
4
5
SELECTOR (o) L-CH
EQ (i) L-CH
CONTROL (j) L-CH
CONTROL (j) R-CH
SELECTOR (o) R-CH
POWER SUPPLY (m)
INDICATOR (m)
PHONO-1
PHONO-2
CD
TUNER
LINE-1
LINE-2
REC
TAPE-1
PLAY
TAPE-2
TAPE-3
UK
SEV
EUROPE
AC 240V 50 Hz
AC 220V 50 Hz
RED 7.0V
RED 0V
GREEN 24V
GREEN 0V
ORANGE 32.5V
GRAY 0V
ORANGE 32.5V
BROWN 0V
F-4608
F-5358
F-4607
F-4609
F-4613
F-4614
F-4615
F-4617
F-4612
F-5087
2SA992
2SA1145
2SC1845
2SC2705
DTA143
DTC143
2SD357
RB152-LEF
UB-152LFE
MV-12
10YD4.5-B
1S1588
1S2473
10E-2
11E-2
SEL1110S
SLP-470C
05Z2.7-Z
05Z6.2-Y
05Z13-Y
05Z22-Y
05Z24-Y

SYMBOL OF FUNCTION
(i) EQ
(j) CONTROL
(ℓ) PROTECTOR
(m) POWER SUPPLY
(n) INDICATOR
(o) SELECTOR
(h) MC AMP

SYMBOL
△ Cerami Capacitor
● Film Capacitor
●ₚₚ Polypropylene Film
●ₘ Mylar
▣ Non-Inflammable Resistor
⊗ Polystyrene
▲ Barrier Layer Capacitor

RESISTORS
Are in ohms, 1/4 Watts, ±5% Tolerance
Unless Otherwise Noted. k:kΩ, M:MΩ
CAPACITORS
Are in μF, Unless Otherwise Noted. P:pF
TOLERANCE
J:±5% G:±2% F:±1%
Each D.C Voltage shows the nominal value in volts at no input signal.
Electrolytic Capacitor:Capacitance (μF)/Voltl(V)

⚠ is Safety Part.
Use only replacement parts recommended by the manufacturer.

※ Using at FTZ MODEL only

SWITCHES
oS1a ~ f SELECTOR
1. MM
2. HIGH MC
3. MC
oS2a ~ f, oS5 REC SELECTOR
1. CD
2. OFF
3. SOURCE
4. 1 ▶ 2 · 3
5. 2 ▶ 1 · 3
oS3a ~ d ACCESSORY
a MUTING
1. off 2. on
b EQUALIZER
1. off 2. on
c LOUDNESS
1. off 2. on
d SUBSONIC
1. off 2. on

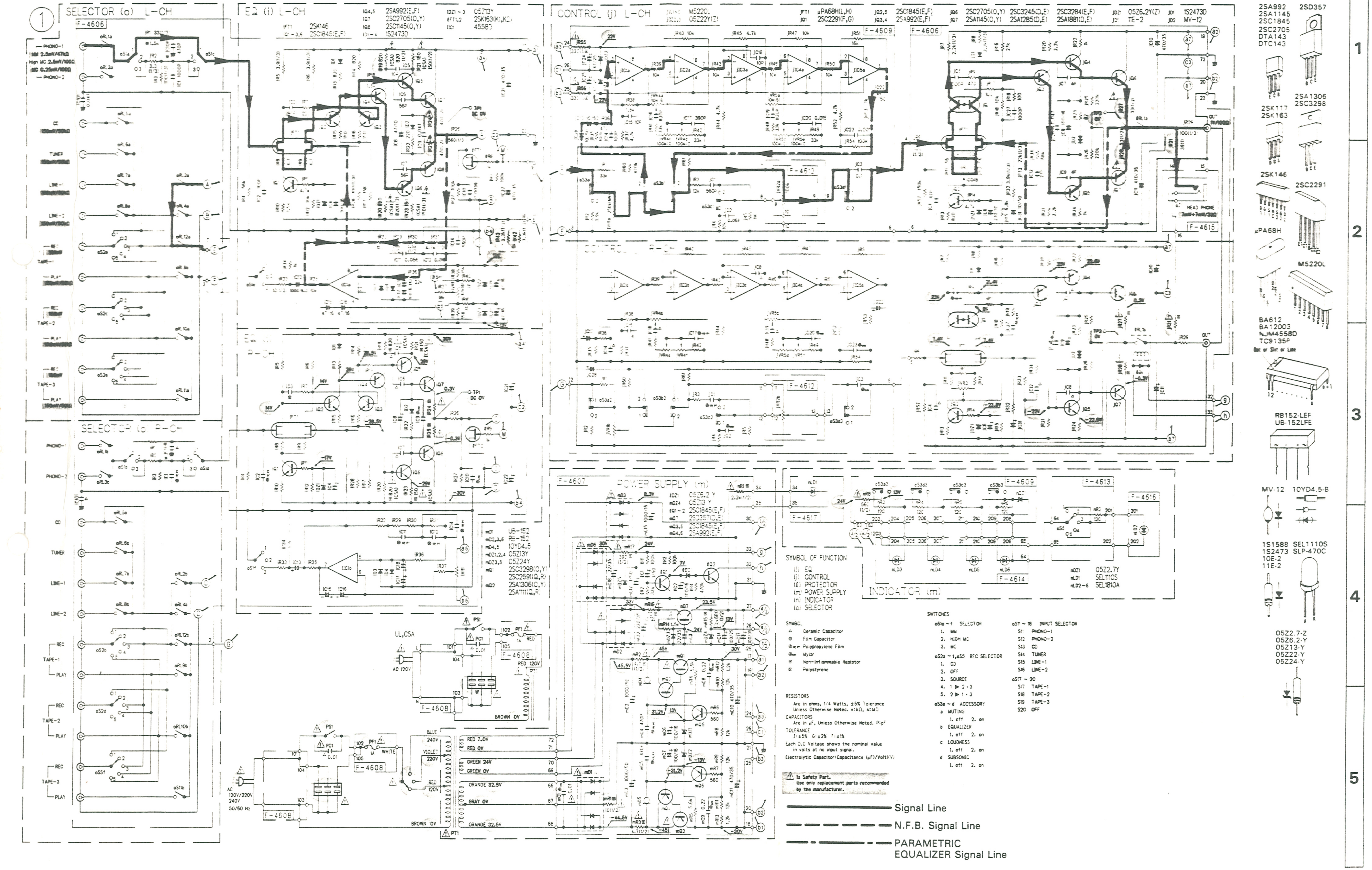
oS11 ~ 16 INPUT SELECTOR
S11 PHONO-1
S12 PHONO-2
S13 CD
S14 TUNER
S15 LINE-1
S16 LINE-2
oS17 ~ 20
S17 TAPE-1
S18 TAPE-2
S19 TAPE-3
S20 OFF

———— Signal Line
— — — — N.F.B. Signal Line
—— - ——— - - PARAMETRIC EQUALIZER Signal Line

5. SCHEMATIC DIAGRAM

5-1. Control Amp. Section <XX, UL, CSA>

- * Design and specifications subject to change without notice for improvement.
- * La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
- * Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



SELECTOR (o) L-CH
EQ (i) L-CH
CONTROL (j) L-CH
CONTROL (j) R-CH
EQ (i) R-CH
SELECTOR (o) R-CH
POWER SUPPLY (m)
INDICATOR (m)
PHONO-1
PHONO-2
CD
TUNER
LINE-1
LINE-2
TAPE-1
TAPE-2
TAPE-3
REC
PLAY
HEAD PHONE
UL,CSA
AC 120V
AC 120V/220V 240V 50/60 Hz
F-4606
F-4607
F-4608
F-4609
F-4612
F-4613
F-4614
F-4615
F-4616
F-4617
2SA992
2SA1145
2SC1845
2SC2705
DTA143
DTC143
2SD357
2SA1306
2SC3298
2SK117
2SK163
2SK146
2SC2291
μPA68H
M5220L
BA612
BA12003
NJM4558D
TC9135P
RB152-LEF
UB-152LFE
MV-12
10YD4.5-B
1S1588
1S2473
10E-2
11E-2
SEL1110S
SLP-470C
05Z2.7-Z
05Z6.2-Y
05Z13-Y
05Z22-Y
05Z24-Y
1
2
3
4
5

SYMBOL OF FUNCTION
(i) EQ
(j) CONTROL
(ℓ) PROTECTOR
(m) POWER SUPPLY
(n) INDICATOR
(o) SELECTOR

SYMBOL
- △ Ceramic Capacitor
- ◎ Film Capacitor
- ◎PP Polypropylene Film
- ◎m Mylar
- ⊡ Non-Inflammable Resistor
- ⊗ Polystyrene

RESISTORS
Are in ohms, 1/4 Watts, ±5% Tolerance Unless Otherwise Noted. k:kΩ, M:MΩ

CAPACITORS
Are in μF, Unless Otherwise Noted. P:pF

TOLERANCE
J:±5% G:±2% F:±1%

Each D.C Voltage shows the nominal value in volts at no input signal.

Electrolytic Capacitor:Capacitance (μF)/Volt(V)

SWITCHES

oS1a ~ f SELECTOR
1. MM
2. HIGH MC
3. MC

oS2a ~ f,oS5 REC SELECTOR
1. CD
2. OFF
3. SOURCE
4. 1 ▶ 2 · 3
5. 2 ▶ 1 · 3

oS3a ~ d ACCESSORY
- a MUTING
  1. off 2. on
- b EQUALIZER
  1. off 2. on
- c LOUDNESS
  1. off 2. on
- d SUBSONIC
  1. off 2. on

oS11 ~ 16 INPUT SELECTOR
- S11 PHONO-1
- S12 PHONO-2
- S13 CD
- S14 TUNER
- S15 LINE-1
- S16 LINE-2

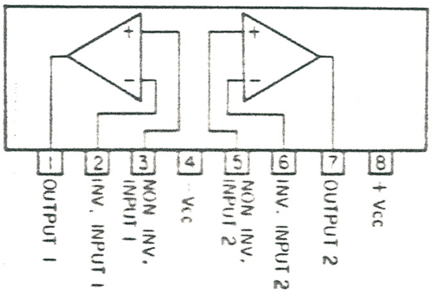
oS17 ~ 20
- S17 TAPE-1
- S18 TAPE-2
- S19 TAPE-3
- S20 OFF

⚠ Is Safety Part.
Use only replacement parts recommended by the manufacturer.

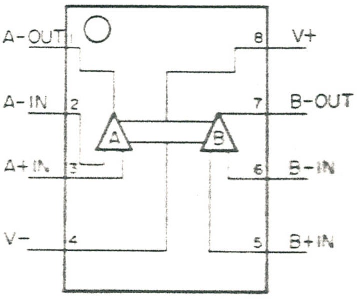
——— Signal Line
– – – N.F.B. Signal Line
—·—·— PARAMETRIC EQUALIZER Signal Line

6. INTERIOR BLOCK DIAGRAM OF IC

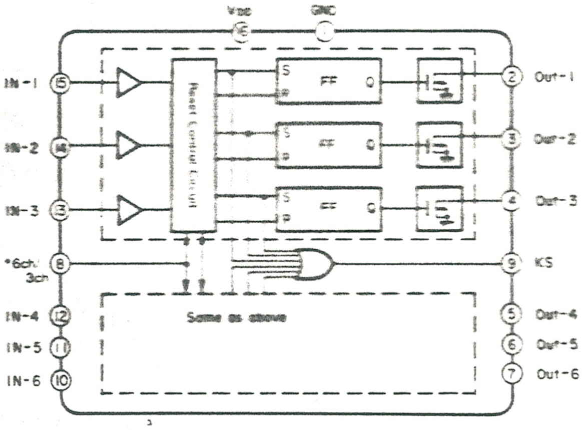
•M5220L (Audio Pre Amp.)


+
−
1 OUTPUT 1
2 INV. INPUT 1
3 NON INV. INPUT 1
4 −Vcc
5 NON INV. INPUT 2
6 INV. INPUT 2
7 OUTPUT 2
8 +Vcc

•NJM4558D (OP Amp.)

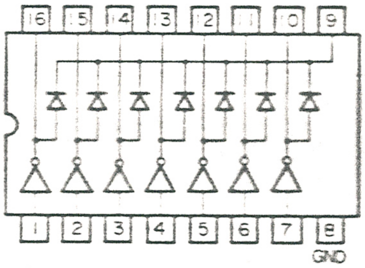

A-OUT 1
A-IN 2
A+IN 3
V− 4
A
B
8 V+
7 B-OUT
6 B-IN
5 B+IN

•TC9135P (Function Switch)

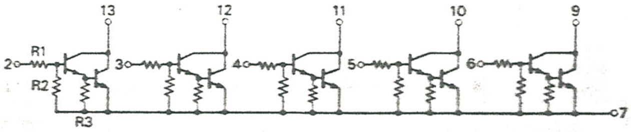

Vdd 16
GND
IN-1 15
IN-2 14
IN-3 13
*6ch/3ch 8
IN-4 12
IN-5 11
IN-6 10
Reset Control Circuit
S
R
FF
Q
2 Out-1
3 Out-2
4 Out-3
9 KS
5 Out-4
6 Out-5
7 Out-6
Same as above

* Terminal for inputing mutual reset control.
When this terminal is H level voltage, all Flip-Flop Circuits are mutual reset type.
When this terminal is L level voltage, each Flip-Flop circuits are separated to two mutual reset groups of IN-1 ~ IN-3 and IN-4 ~ IN-6.

•BA12003 (Indicator Lamp Drive)

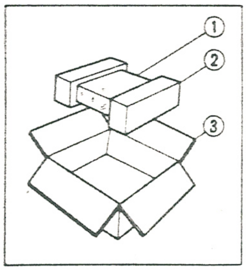

16
15
14
13
12
11
10
9
1
2
3
4
5
6
7
8
GND

•BA612 (Indicator Lamp Drive)


13
12
11
10
9
2
R1
R2
R3
3
4
5
6
7

7. PACKING LIST

Parts No.	Stock No.	Description
1	47858600	Vinyl Cover
2	47675300	Styrofoam Packing
3	27209500	Carton Case



8. ACCESSORY LIST

Stock No.	Description
38103300	PJP Cord
48587100	Short Pin Plug x 2
49013600	Operating Instruction (∗E•F•S)
49013700	Operating Instruction (∗G•I•Sw)

∗Note:
E•F•S: English•French and Spanish Version
G•I•Sw: German•Italian and Swedish Version

Sansui

SANSUI ELECTRIC CO., LTD.: 14-1, Izumi 2-chome, Suginami-ku, Tokyo 168 Japan
PHONE: (03) 324-8891/TELEX: 232-2076 (International Division)
SANSUI ELECTRONICS CORPORATION: 1250 Valley Brook Ave. Lyndhurst, N.J. 07071 U.S.A.
17150 South Margay Ave. Carson, California 90746 U.S.A.
3036 Koapaka Street, Honolulu, Hawaii 96819 U.S.A.
SANSUI ELECTRONICS (U.K.) LTD.: Unit 10A, Lyon Industrial Estate, Rockware Avenue, Greenford, Middx UB6, OAA, England
SANSUI ELECTRONICS G.M.B.H.: Pau Enrich Strasse 8, 6074 Rodermark 2, West Germany

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